

Amendment to the Claims

This listing of the claims replaces all prior versions and listings of claims in the application. Please amend claims 1 and 5 through 11 and add new claims 12 and 13 as follows:

1. (Currently amended). A method of transmitting data over a wireless ~~link~~network, the method comprising:

inserting the data into packets according to a format corresponding to ~~at least a certain layer or layers~~layer 2 of a first protocol for data transmission over the wireless network;

constructing a frame in accordance with layer 2 of a second protocol for data transmission over the wireless network, the second protocol being different from the first protocol, the frame comprising said packets; and

transmitting the constructed frame over the wireless network according to the second protocol.

2. (Previously presented) The method according to claim 1, wherein the data to be transmitted are formatted according to a protocol of a cabled bus.

3. (Previously presented) The method according to claim 2 wherein the cabled bus is an IEEE 1394 bus, the first protocol for data transmission over the wireless network is HiperLAN/2 and the second protocol for data transmission over the wireless network is a protocol from a family of IEEE 802.11 protocols.

4. (Previously presented) The method according to claim 2, wherein the packets are constructed into the frame by an IEEE 1394 SSCS module.

5. (Currently amended) The method according to claim 1, wherein the frame is constructed from said packets according to an intermediate format defined by said ~~certain~~layer 2 ~~or layers~~ of the first protocol for data transmission over the wireless network, the constructed frame being in accordance with the second protocol for data transmission over ~~at~~the wireless network, the constructed frame being distinguished from other frames transmitted over ~~at~~the wireless network by a specific identifier in the constructed frame.

6. (Currently amended) The method according to claim 1, wherein the frame is constructed from said packets according to an intermediate format defined by said ~~certain~~ layer 2 ~~or layers~~ of the first protocol for data transmission over the wireless network and in accordance with the second protocol for data transmission over ~~at the~~ the wireless network, the constructed frame being distinguished from other frames through the use of specific media access control (MAC) ~~MAC~~ addresses identifying origin and destination of the constructed frame.

7. (Currently amended) A data transmission apparatus comprising:

means for receiving data for a first frame according to a first protocol and formatted according to a cabled bus,

means for connecting to a wireless network,

a module for processing the first frame formatted according to the cabled bus to insert the data received on the cabled bus into a second frame according to a format defined by a second protocol for data transmission over the wireless network,

wherein the apparatus further comprises means for generating the second frame for transmission in accordance with layer 2 of the second protocol for data transmission over the wireless network, the second protocol being different from the first protocol, by inserting packets of said received data from the cabled bus, the packets of said received data being formatted according to ~~at least a certain~~ layer 2 ~~or layers~~ of the first protocol.

8. (Currently amended) The apparatus according to claim 7, wherein the cabled bus is an IEEE 1394 bus, the first protocol for data transmission over the wireless network is HiperLAN/2 and the second protocol for data transmission over ~~at the~~ the wireless network is a protocol from a family of IEEE 802.11 protocols.

9. (Currently amended) The apparatus according to claim 7, wherein the generated frame comprises ~~a certain~~ layer 2 ~~or layers~~ necessary for encapsulation and transmission of packets as said frame for transmission generated with aid of said ~~certain~~ layer 2 ~~or layers~~ of the first protocol.

10. (Currently amended) The method according to ~~Claim~~claim 5, wherein the specific identifier comprises a logical link control packet appended to an IEEE 802.11 frame.

11. (Currently amended) The method according to ~~Claim~~claim 6, wherein the specific MAC addresses comprise first and second addresses, a first address at an IEEE 802.11 ~~driver~~driver level and a second address created by repeating IEEE 802.11 authentication and association phases.

12. (New) The method according to claim 3, the first HyperLAN/2 protocol convergence layer 2 obtaining the packets as segmentation and reassembly packet data units.

13. (New) The apparatus according to claim 7, further comprising a segmentation and reassembly (SAR) module of the IEEE 1394 SSCS layer for constructing segmentation and reassembly packet data units for packaging in a long channel (LCH) packet.